

Attorney Docket No. K&W 305-WCG
CH8005US

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants : Ulrich Reiners, et. al.
Serial No. : 09/763,679
Filed : May 15, 2001
For : PACKAGING MATERIAL WITH A
POLYOLEFIN FOAM LAYER
Art Unit : 1771
Examiner : Victor S. Chang

December 22, 2003

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

APPEAL BRIEF UNDER 37 C.F.R. RULE 1.192

This is an appeal from the final rejection by an Examiner of Art Unit. 1771.

1. REAL PARTY IN INTEREST

The instant application is owned by CONVENIENCE FOOD SYSTEMS B.V., record owner hereof.

2. RELATED APPEALS AND INTERFERENCES

The undersigned is not aware of any appeals, interferences, re-examinations, infringement actions, or the like, in any related applications.

3. STATUS OF THE CLAIMS

The claims pending in this application are claims 1-17 and 19-21 and all of said claims are under appeal.

4. STATUS OF AMENDMENTS

The last amendment made was that filed on October 27, 2003, and said amendment was entered. There are no unentered amendments.

5. SUMMARY OF THE INVENTION

Each of the appealed claims pertains to novel packaging material comprising a polypropylene foam base layer (A), together with further layers, one of which is a layer (B) adjacent to the base layer and comprises at least one of the polyolefins of the base layer. The total thickness of the layers A+B is 0.5 to 2 mm, and the thickness of layer B is from 1/6 to 1/2 the thickness of layer A.

The inventive multilayer films have an excellent thermoformability on so-called FFS-machines (form-fill and sealing machines) and thus can be formed into packages, preferably to trays, by deep drawing (page 6, lines 18-20).

An essential feature of Appellants' invention resides in the discovery that by maintaining the thickness of layer B at from 1/6 to 1/2 the thickness of layer A (page 2, lines 26-28), a substantial and unexpected improvement in mechanical

properties can be achieved without any increase in the thickness of the multilayer films, which can even be achieved where the total thickness is reduced (page 6, lines 27-34; page 9, table 3 and lines 21-23).

Note in particular the surprising results demonstrated by a comparison of Example 1 to the Comparative example. The films of Example 1 and the Comparative example were exactly the same in terms of their sequence of layers and the composition of each layer. However in the film of Example 1 layer B had a thickness of 160 μm , which was 1/5 the thickness of layer A; whereas in the comparative example, layer B was only 1/29 the thickness of layer A. As shown, the film of Example 1, even though it was much thinner than the layer of the comparative example (1010 μm vs. 1250 μm) still had far better mechanical properties than the film of the comparative example.

6. ISSUES

The sole issue is whether claims 1-17 and 19-21 are unpatentable under 35 U.S.C. 103(a) as obvious over Laurent et al. (US 6,132,539).

7. GROUPING OF CLAIMS

The rejected claims stand or fall together.

8. ARGUMENT

Laurent is directed towards a method of preparing a coated polypropylene foam layer which avoids the need for a low-temperature plasticizing bonding layer. According to Laurent, a foam sheet is coated by extrusion lamination, wherein the foam sheet and a coating film are guided together and a further bonding layer is extruded between them (col. 2, lines 26 - 29).

The Examiner points to column 1, lines 12-15, where Laurent, in discussing the prior art, mentions foamed polypropylene layers coated on either or both sides with a coating film, and that "Depending on the composition and thickness of the coating film, this film may also serve as a further means for increasing thickness" (office action of 1/30/03, paper # 8, page 3). The Examiner also points to a five-layer coating film A shown in Fig. 3 of Laurent which consists of a coating film A, a foam layer B and a bonding layer 30 (Office action of 1/30/03, page 4).

The Examiner acknowledges that Laurent does not include an express teaching of the range of thickness ratio between foam layer (B) and binding layer (30), but contends that "adjusting the thickness ratio between these layers are within the ordinary skill of the art, motivated to provide suitable properties, such as stiffness, to the thermoformed tray" (Office Action of 1/30/03, page 4).

The Examiner's contention is totally unsubstantiated by any teaching or suggestion found in the prior art. Nowhere can there be found any teaching or suggestion that the substantial improvement in mechanical properties demonstrated by Appellants' examples could be achieved by maintaining the total thickness of layers A + B in the range of 0.5 to 2.0 mm and the thickness of layer B in the range of 1/6 to 1/2 of the thickness of layer A.

There is no evidence whatsoever presented that would show that any person skilled in the art would be motivated to "adjust" the thickness ratio of Laurent's foam layer (B) and binding layer (30) to obtain a total thickness of these two layers that was between 0.5 and 2 mm, and a thickness ratio of layer(30) to layer (B) of 1/6 - 1/2.

There is, however, plenty of evidence that no person skilled in the art would even dream of doing this, and, in addition, that this simply could not be done without going contrary to Laurent's teaching.

In this regard, it should be noted that even when Laurent's bonding layer is at its maximum thickness (30 μm) and his foamed layer is at its minimum thickness (0.5 mm) (see col. 3, lines 34-45) the ratio of the bonding layer thickness to the foamed layer thickness is far below Appellants' minimum of 1/6. More specifically, layer 30 has a thickness range of 5 to 30 μm . Since one $\mu\text{m} = 10^{-3}$ mm, Laurent's layer 30 has a thickness range of .005 - .030 mm.

At best, therefore, Laurent's ratio of layer (30) to his layer (B), would be only 0.030/0.5 which = 1/17. This is not even close to Appellants' ratio of from 1/6 - 1/2.

Thus, there is no way that anyone reading Laurent could even "accidentally" arrive at Appellants' novel film.

Moreover, the tremendous improvement in the E-modulus and elongation at break that was achieved with Appellants' film, as compared to a thicker film having the same sequence of layers of the same composition, will be seen as totally surprising and unexpected by those skilled in the art.

Moreover, the tremendous improvement in the E-modulus and elongation at break that was achieved with Appellants' film, as compared to a thicker film having the same sequence of layers of the same composition, will be seen a totally surprising and unexpected by those skilled in the art.

In the Advisory Action, the Examiner argues that;

"...it would have been obvious to one of ordinary skill in the art to optimize the stiffness of the multilayer by increasing the thickness of the bonding layer, motivated by the desire to minimize the material cost, since it is well known that barrier and sealing

polymers are generally more costly than the polypropylene used for the bonding layer." (Advisory Action, page 3)

This is simply not a reasonable statement to make, as those skilled in the art do not use "bonding layers" to "increase thickness". Bonding layers are used to bond two other layers together, and generally it would be desirable to minimize their thickness. More to the point, however, is the fact that the Examiner has not produced any evidence whatsoever that those skilled in the art would "increase the thickness of the bonding layer...to optimize the stiffness".

Even if this were done, however, Appellants' invention would not be arrived at. Appellants do not simply "increase the thickness" of their films. Appellants have discovered that by maintaining the ratio of the thicknesses of layers B:A within a specific range, in combination with maintaining the total thickness of A+B within a specific range, they achieve a surprising improvement in mechanical properties, such as resistance to breaking and stiffness of the E-modulus (page 6, lines 27-30). THIS CONSIDERABLE IMPROVEMENT IS ACHIEVED WITHOUT ANY INCREASE IN THE THICKNESS OF THE MULTILAYER FILMS...(Page 6, lines 30-31). Note that in the Examples, the film according to the invention had a total thickness of 1010 µm (Page 8, table 1) whereas the film of the comparative example had a total thickness of 1250 µm (Page 9, table 2). Yet the thinner inventive film had better physical properties than the thicker comparative film (Page 9, table 3).

There is accordingly no reasonable basis upon which Appellants' claims can be seen as obvious over the Laurent reference.

9 CONCLUSION

Wherefore, it is submitted that the final rejection is in error and should be reversed.

CONDITIONAL PETITION FOR EXTENSION OF TIME

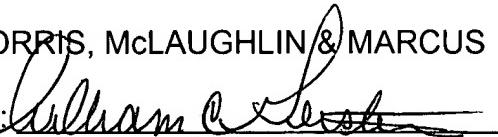
If any extension of time for this amendment is required, Appellants request that this be considered a petition therefore. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit Account No. 14-1263.

Respectfully submitted,

NORRIS, McLAUGHLIN & MARCUS

By: 

William C. Gerstenzang

Reg. No. 27,552

WCG:tmh

220 East 42nd Street, 30th Floor
New York, New York 10017
(212) 808-7000

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Label No. EL 973656429 US addressed to MAIL STOP AF, Commissioner for Patents, P.O. Box 1450 on December 22, 2003

Julie Harting
Julie Harting
Date: December 22, 2003

10. APPENDIX A

The claims on appeal read as follows:

Claim 1. A multilayer film comprising the following sequence of layers:

- A) a base layer of foamed propylene homopolymers, copolymer or mixtures thereof,
 - B) a layer comprising at least one of the polyolefins of the foam layer A,
 - C) optionally a tie layer based on a polyolefin
 - D) optionally an adhesive layer
 - E) optionally a gas barrier layer, a flavortight barrier layer, or both,
 - F) an adhesive layer,
 - G) an optionally sealable or peelable surface layer,
- whereby the total thickness of layers A and B ranges from 0.5 to 2 mm and the thickness of layer B ranges from 1/6 to 1/2 of the thickness of layer A.

Claim 2. A multilayer film according to claim 1, wherein the total thickness of layers A and B ranges from 0.6 to 1.4 mm.

Claim 3. A multilayer film according to claim 1 wherein the thickness of layer B ranges from 1/6 to 1/3 of the thickness of layer A.

Claim 4. A multilayer film according to Claim 1, wherein layer A is

made of a foamed mixture of polypropylene with long chain branching and a propylene-ethylene-blockcopolymer.

Claim 5. A multilayer film according to Claim 1, wherein layer B is made of polypropylene or a propylene-ethylene-copolymer.

Claim 6. A multilayer film according to Claim 1, wherein layer C is made of a polyolefin based on a monomer which is present in a predominant amount in the polyolefins of foam layer A.

Claim 7. A multilayer film according to claim 6, wherein the polyolefin is polypropylene.

Claim 8. A multilayer film according to Claim 1, wherein layer E is present and is made of ethylene-vinylalcohol copolymer.

Claim 9. A multilayer film according to Claim 1, wherein layer G is made of a sealable polymer and optionally contains additives.

Claim 10. A multilayer film according to Claim 9, wherein layer G is made of a low density polyethylene or an ionomer.

Claim 11. A multilayer film according to Claim 1, wherein layer G is made of a peelable polymer and optionally contains additives.

Claim 12. A multilayer film according to Claim 11, wherein layer G is made of a mixture of low density polyethylene and a polybutylene.

Claim 13. A multilayer film according to Claim 1, wherein the total thickness of layers C to G ranges from 20 to 70 μm .

Claim 14. A multilayer film according to Claim 13, wherein the total thickness is 30 to 50 μm .

Claim 15. A packaging material comprising the multilayer film of Claim 1.

Claim 16. A packaging item made of a film according to Claim 1.

Claim 17. A packaging item according to Claim 16, wherein said packaging item is a packaging tray.

DEC 24 2003

Image AF/1700
B

PTO/SB/17 (10-03)

Approved for use through 07/31/2006. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

DEC 22 2003

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27TOTAL AMOUNT OF PAYMENT (\$)
\$330.00

Complete if Known

Application Number	09/763,679
Filing Date	February 26, 2001
First Named Inventor	Ulrich REINERS
Examiner Name	Victor S. Chang
Art Unit	1771
Attorney Docket No.	K&W 305-WCG

METHOD OF PAYMENT (check all that apply)				FEE CALCULATION (continued)																																																																																																																																																																					
<input type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None <input checked="" type="checkbox"/> Deposit Account: Deposit Account Number 14-1263 Deposit Account Name Norris McLaughlin & Marcus				3. ADDITIONAL FEES <table border="1"> <thead> <tr> <th>Large Entity</th> <th>Small Entity</th> <th colspan="2">Fee Description</th> <th>Fee Paid</th> </tr> <tr> <th>Fee Code (\$)</th> <th>Fee Code (\$)</th> <th>Fee (\$)</th> <th>Fee (\$)</th> <th></th> </tr> </thead> <tbody> <tr> <td>1051</td> <td>2051</td> <td>65</td> <td>Surcharge - late filing fee or oath</td> <td></td> </tr> <tr> <td>1052</td> <td>2052</td> <td>25</td> <td>Surcharge - late provisional filing fee or cover sheet</td> <td></td> </tr> <tr> <td>1053</td> <td>1053</td> <td>130</td> <td>Non - English specification</td> <td></td> </tr> <tr> <td>1812</td> <td>1812</td> <td>2,520</td> <td>For filing a request for ex parte reexamination</td> <td></td> </tr> <tr> <td>1804</td> <td>1804</td> <td>920*</td> <td>Requesting publication of SIR prior to Examiner action</td> <td></td> </tr> <tr> <td>1805</td> <td>1805</td> <td>1,840*</td> <td>Requesting publication of SIR after Examiner action</td> <td></td> </tr> <tr> <td>1251</td> <td>2251</td> <td>55</td> <td>Extension for reply within first month</td> <td></td> </tr> <tr> <td>1252</td> <td>2252</td> <td>210</td> <td>Extension for reply within second month</td> <td></td> </tr> <tr> <td>1253</td> <td>2253</td> <td>475</td> <td>Extension for reply within third month</td> <td></td> </tr> <tr> <td>1254</td> <td>2254</td> <td>740</td> <td>Extension for reply within fourth month</td> <td></td> </tr> <tr> <td>1255</td> <td>2255</td> <td>1,005</td> <td>Extension for reply within fifth month</td> <td></td> </tr> <tr> <td>1401</td> <td>2401</td> <td>165</td> <td>Notice of Appeal</td> <td></td> </tr> <tr> <td>1402</td> <td>2402</td> <td>165</td> <td>Filing a brief in support of an appeal</td> <td>330.00</td> </tr> <tr> <td>1403</td> <td>2403</td> <td>145</td> <td>Request for oral hearing</td> <td></td> </tr> <tr> <td>1451</td> <td>1451</td> <td>1,510</td> <td>Petition to institute a public use proceeding</td> <td></td> </tr> <tr> <td>1452</td> <td>2452</td> <td>55</td> <td>Petition to revive - unavoidable</td> <td></td> </tr> <tr> <td>1453</td> <td>2453</td> <td>665</td> <td>Petition to revive - unintentional</td> <td></td> </tr> <tr> <td>1501</td> <td>2501</td> <td>665</td> <td>Utility issue fee (or reissue)</td> <td></td> </tr> <tr> <td>1502</td> <td>2502</td> <td>240</td> <td>Design issue fee</td> <td></td> </tr> <tr> <td>1503</td> <td>2503</td> <td>320</td> <td>Plant issue fee</td> <td></td> </tr> <tr> <td>1460</td> <td>1460</td> <td>130</td> <td>Petitions to the Commissioner</td> <td></td> </tr> <tr> <td>1807</td> <td>1807</td> <td>50</td> <td>Processing fee under 37 CFR § 1.17(q)</td> <td></td> </tr> <tr> <td>1806</td> <td>1806</td> <td>180</td> <td>Submission of Information Disclosure Statement</td> <td></td> </tr> <tr> <td>8021</td> <td>8021</td> <td>40</td> <td>Recording each patent assignment per property (times number of properties)</td> <td></td> </tr> <tr> <td>1809</td> <td>2809</td> <td>385</td> <td>Filing a submission after final rejection (37 CFR § 1.129(a))</td> <td></td> </tr> <tr> <td>1810</td> <td>2810</td> <td>385</td> <td>For each additional invention to be examined (37 CFR § 1.129(b))</td> <td></td> </tr> <tr> <td>1801</td> <td>2801</td> <td>385</td> <td>Request for Continued Examination (RCE)</td> <td></td> </tr> <tr> <td>1802</td> <td>1802</td> <td>900</td> <td>Request for expedited examination of a design application</td> <td></td> </tr> <tr> <td colspan="4">Other fee (specify) _____</td> <td></td> </tr> <tr> <td colspan="4">*Reduced by Basic Filing Fee Paid</td> <td colspan="2">SUBTOTAL (3)</td> <td>(\$) \$330.00</td> </tr> </tbody> </table>				Large Entity	Small Entity	Fee Description		Fee Paid	Fee Code (\$)	Fee Code (\$)	Fee (\$)	Fee (\$)		1051	2051	65	Surcharge - late filing fee or oath		1052	2052	25	Surcharge - late provisional filing fee or cover sheet		1053	1053	130	Non - English specification		1812	1812	2,520	For filing a request for ex parte reexamination		1804	1804	920*	Requesting publication of SIR prior to Examiner action		1805	1805	1,840*	Requesting publication of SIR after Examiner action		1251	2251	55	Extension for reply within first month		1252	2252	210	Extension for reply within second month		1253	2253	475	Extension for reply within third month		1254	2254	740	Extension for reply within fourth month		1255	2255	1,005	Extension for reply within fifth month		1401	2401	165	Notice of Appeal		1402	2402	165	Filing a brief in support of an appeal	330.00	1403	2403	145	Request for oral hearing		1451	1451	1,510	Petition to institute a public use proceeding		1452	2452	55	Petition to revive - unavoidable		1453	2453	665	Petition to revive - unintentional		1501	2501	665	Utility issue fee (or reissue)		1502	2502	240	Design issue fee		1503	2503	320	Plant issue fee		1460	1460	130	Petitions to the Commissioner		1807	1807	50	Processing fee under 37 CFR § 1.17(q)		1806	1806	180	Submission of Information Disclosure Statement		8021	8021	40	Recording each patent assignment per property (times number of properties)		1809	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))		1810	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))		1801	2801	385	Request for Continued Examination (RCE)		1802	1802	900	Request for expedited examination of a design application		Other fee (specify) _____					*Reduced by Basic Filing Fee Paid				SUBTOTAL (3)		(\$) \$330.00
Large Entity	Small Entity	Fee Description		Fee Paid																																																																																																																																																																					
Fee Code (\$)	Fee Code (\$)	Fee (\$)	Fee (\$)																																																																																																																																																																						
1051	2051	65	Surcharge - late filing fee or oath																																																																																																																																																																						
1052	2052	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																						
1053	1053	130	Non - English specification																																																																																																																																																																						
1812	1812	2,520	For filing a request for ex parte reexamination																																																																																																																																																																						
1804	1804	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																						
1805	1805	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																						
1251	2251	55	Extension for reply within first month																																																																																																																																																																						
1252	2252	210	Extension for reply within second month																																																																																																																																																																						
1253	2253	475	Extension for reply within third month																																																																																																																																																																						
1254	2254	740	Extension for reply within fourth month																																																																																																																																																																						
1255	2255	1,005	Extension for reply within fifth month																																																																																																																																																																						
1401	2401	165	Notice of Appeal																																																																																																																																																																						
1402	2402	165	Filing a brief in support of an appeal	330.00																																																																																																																																																																					
1403	2403	145	Request for oral hearing																																																																																																																																																																						
1451	1451	1,510	Petition to institute a public use proceeding																																																																																																																																																																						
1452	2452	55	Petition to revive - unavoidable																																																																																																																																																																						
1453	2453	665	Petition to revive - unintentional																																																																																																																																																																						
1501	2501	665	Utility issue fee (or reissue)																																																																																																																																																																						
1502	2502	240	Design issue fee																																																																																																																																																																						
1503	2503	320	Plant issue fee																																																																																																																																																																						
1460	1460	130	Petitions to the Commissioner																																																																																																																																																																						
1807	1807	50	Processing fee under 37 CFR § 1.17(q)																																																																																																																																																																						
1806	1806	180	Submission of Information Disclosure Statement																																																																																																																																																																						
8021	8021	40	Recording each patent assignment per property (times number of properties)																																																																																																																																																																						
1809	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))																																																																																																																																																																						
1810	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))																																																																																																																																																																						
1801	2801	385	Request for Continued Examination (RCE)																																																																																																																																																																						
1802	1802	900	Request for expedited examination of a design application																																																																																																																																																																						
Other fee (specify) _____																																																																																																																																																																									
*Reduced by Basic Filing Fee Paid				SUBTOTAL (3)		(\$) \$330.00																																																																																																																																																																			
**or number previously paid, if greater; For Reissues, see above																																																																																																																																																																									
SUBMITTED BY																																																																																																																																																																									
Name (Print/Type)	William C. Gerstenzang	Registration No. (Attorney/Agent)	27,552	Telephone	212-808-0700																																																																																																																																																																				
Signature	<i>William C. Gerstenzang</i>			Date	December 22, 2003																																																																																																																																																																				

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Attorney Docket No. K&W 305-WCG
CH8005US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants : Ulrich Reiners, et. al.
Serial No. : 09/763,679
Filed : May 15, 2001
For : PACKAGING MATERIAL WITH A
POLYOLEFIN FOAM LAYER
Art Unit : 1771
Examiner : Victor S. Chang

December 22, 2003

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

APPEAL BRIEF UNDER 37 C.F.R. RULE 1.192

This is an appeal from the final rejection by an Examiner of Art Unit. 1771.

1. REAL PARTY IN INTEREST

The instant application is owned by CONVENIENCE FOOD SYSTEMS
B.V., record owner hereof.

2. RELATED APPEALS AND INTERFERENCES

The undersigned is not aware of any appeals, interferences, re-examinations, infringement actions, or the like, in any related applications.

3. STATUS OF THE CLAIMS

The claims pending in this application are claims 1-17 and 19-21 and all of said claims are under appeal.

4. STATUS OF AMENDMENTS

The last amendment made was that filed on October 27, 2003, and said amendment was entered. There are no unentered amendments.

5. SUMMARY OF THE INVENTION

Each of the appealed claims pertains to novel packaging material comprising a polypropylene foam base layer (A), together with further layers, one of which is a layer (B) adjacent to the base layer and comprises at least one of the polyolefins of the base layer. The total thickness of the layers A+B is 0.5 to 2 mm, and the thickness of layer B is from 1/6 to 1/2 the thickness of layer A.

The inventive multilayer films have an excellent thermoformability on so-called FFS-machines (form-fill and sealing machines) and thus can be formed into packages, preferably to trays, by deep drawing (page 6, lines 18-20).

An essential feature of Appellants' invention resides in the discovery that by maintaining the thickness of layer B at from 1/6 to 1/2 the thickness of layer A (page 2, lines 26-28), a substantial and unexpected improvement in mechanical

properties can be achieved without any increase in the thickness of the multilayer films, which can even be achieved where the total thickness is reduced (page 6, lines 27-34; page 9, table 3 and lines 21-23).

Note in particular the surprising results demonstrated by a comparison of Example 1 to the Comparative example. The films of Example 1 and the Comparative example were exactly the same in terms of their sequence of layers and the composition of each layer. However in the film of Example 1 layer B had a thickness of 160 μm , which was 1/5 the thickness of layer A; whereas in the comparative example, layer B was only 1/29 the thickness of layer A. As shown, the film of Example 1, even though it was much thinner than the layer of the comparative example (1010 μm vs. 1250 μm) still had far better mechanical properties than the film of the comparative example.

6. ISSUES

The sole issue is whether claims 1-17 and 19-21 are unpatentable under 35 U.S.C. 103(a) as obvious over Laurent et al. (US 6,132,539).

7. GROUPING OF CLAIMS

The rejected claims stand or fall together.

8. ARGUMENT

Laurent is directed towards a method of preparing a coated polypropylene foam layer which avoids the need for a low-temperature plasticizing bonding layer. According to Laurent, a foam sheet is coated by extrusion lamination, wherein the foam sheet and a coating film are guided together and a further bonding layer is extruded between them (col. 2, lines 26 - 29).

The Examiner points to column 1, lines 12-15, where Laurent, in discussing the prior art, mentions foamed polypropylene layers coated on either or both sides with a coating film, and that "Depending on the composition and thickness of the coating film, this film may also serve as a further means for increasing thickness" (office action of 1/30/03, paper # 8, page 3). The Examiner also points to a five-layer coating film A shown in Fig. 3 of Laurent which consists of a coating film A, a foam layer B and a bonding layer 30 (Office action of 1/30/03, page 4).

The Examiner acknowledges that Laurent does not include an express teaching of the range of thickness ratio between foam layer (B) and binding layer (30), but contends that "adjusting the thickness ratio between these layers are within the ordinary skill of the art, motivated to provide suitable properties, such as stiffness, to the thermoformed tray" (Office Action of 1/30/03, page 4).

The Examiner's contention is totally unsubstantiated by any teaching or suggestion found in the prior art. Nowhere can there be found any teaching or suggestion that the substantial improvement in mechanical properties demonstrated by Appellants' examples could be achieved by maintaining the total thickness of layers A + B in the range of 0.5 to 2.0 mm and the thickness of layer B in the range of 1/6 to 1/2 of the thickness of layer A.

There is no evidence whatsoever presented that would show that any person skilled in the art would be motivated to "adjust" the thickness ratio of Laurent's foam layer (B) and binding layer (30) to obtain a total thickness of these two layers that was between 0.5 and 2 mm, and a thickness ratio of layer(30) to layer (B) of 1/6 - 1/2.

There is, however, plenty of evidence that no person skilled in the art would even dream of doing this, and, in addition, that this simply could not be done without going contrary to Laurent's teaching.

In this regard, it should be noted that even when Laurent's bonding layer is at its maximum thickness (30 μm) and his foamed layer is at its minimum thickness (0.5 mm) (see col. 3, lines 34-45) the ratio of the bonding layer thickness to the foamed layer thickness is far below Appellants' minimum of 1/6. More specifically, layer 30 has a thickness range of 5 to 30 μm . Since one $\mu\text{m} = 10^{-3}$ mm, Laurent's layer 30 has a thickness range of .005 - .030 mm.

At best, therefore, Laurent's ratio of layer (30) to his layer (B), would be only 0.030/0.5 which = 1/17. This is not even close to Appellants' ratio of from 1/6 - 1/2.

Thus, there is no way that anyone reading Laurent could even "accidentally" arrive at Appellants' novel film.

Moreover, the tremendous improvement in the E-modulus and elongation at break that was achieved with Appellants' film, as compared to a thicker film having the same sequence of layers of the same composition, will be seen as totally surprising and unexpected by those skilled in the art.

Moreover, the tremendous improvement in the E-modulus and elongation at break that was achieved with Appellants' film, as compared to a thicker film having the same sequence of layers of the same composition, will be seen a totally surprising and unexpected by those skilled in the art.

In the Advisory Action, the Examiner argues that;

...it would have been obvious to one of ordinary skill in the art to optimize the stiffness of the multilayer by increasing the thickness of the bonding layer, motivated by the desire to minimize the material cost, since it is well known that barrier and sealing

polymers are generally more costly than the polypropylene used for the bonding layer.” (Advisory Action, page 3)

This is simply not a reasonable statement to make, as those skilled in the art do not use “bonding layers” to “increase thickness”. Bonding layers are used to bond two other layers together, and generally it would be desirable to minimize their thickness. More to the point, however, is the fact that the Examiner has not produced any evidence whatsoever that those skilled in the art would “increase the thickness of the bonding layer...to optimize the stiffness”.

Even if this were done, however, Appellants’ invention would not be arrived at. Appellants do not simply “increase the thickness” of their films. Appellants have discovered that by maintaining the ratio of the thicknesses of layers B:A within a specific range, in combination with maintaining the total thickness of A+B within a specific range, they achieve a surprising improvement in mechanical properties, such as resistance to breaking and stiffness of the E-modulus (page 6, lines 27-30). **THIS CONSIDERABLE IMPROVEMENT IS ACHIEVED WITHOUT ANY INCREASE IN THE THICKNESS OF THE MULTILAYER FILMS...**(Page 6, lines 30-31). Note that in the Examples, the film according to the invention had a total thickness of 1010 µm (Page 8, table 1) whereas the film of the comparative example had a total thickness of 1250 µm (Page 9, table 2). Yet the thinner inventive film had better physical properties than the thicker comparative film (Page 9, table 3).

There is accordingly no reasonable basis upon which Appellants' claims can be seen as obvious over the Laurent reference.

9 CONCLUSION

Wherefore, it is submitted that the final rejection is in error and should be reversed.

CONDITIONAL PETITION FOR EXTENSION OF TIME

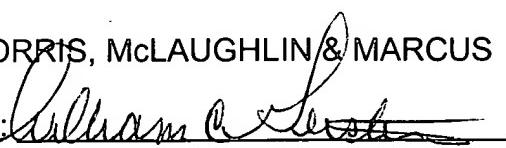
If any extension of time for this amendment is required, Appellants request that this be considered a petition therefore. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit Account No. 14-1263.

Respectfully submitted,

NORRIS, McLAUGHLIN & MARCUS

By: 

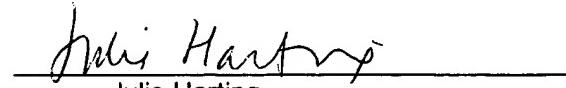
William C. Gerstenzang

Reg. No. 27,552

WCG:tmh

220 East 42nd Street, 30th Floor
New York, New York 10017
(212) 808-7000

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Label No. EL 973656429 US addressed to MAIL STOP AF, Commissioner for Patents, P.O. Box 1450 on December 22, 2003



Julie Harting
Date: December 22, 2003

10. APPENDIX A

The claims on appeal read as follows:

Claim 1. A multilayer film comprising the following sequence of layers:

- A) a base layer of foamed propylene homopolymers, copolymer or mixtures thereof,
- B) a layer comprising at least one of the polyolefins of the foam layer A,
- C) optionally a tie layer based on a polyolefin
- D) optionally an adhesive layer
- E) optionally a gas barrier layer, a flavortight barrier layer, or both,
- F) an adhesive layer,
- G) an optionally sealable or peelable surface layer,
whereby the total thickness of layers A and B ranges from 0.5 to 2 mm
and the thickness of layer B ranges from 1/6 to 1/2 of the thickness of
layer A.

Claim 2. A multilayer film according to claim 1, wherein the total thickness of layers A and B ranges from 0.6 to 1.4 mm.

Claim 3. A multilayer film according to claim 1 wherein the thickness of layer B ranges from 1/6 to 1/3 of the thickness of layer A.

Claim 4. A multilayer film according to Claim 1, wherein layer A is

made of a foamed mixture of polypropylene with long chain branching and a propylene-ethylene-blockcopolymer.

Claim 5. A multilayer film according to Claim 1, wherein layer B is made of polypropylene or a propylene-ethylene-copolymer.

Claim 6. A multilayer film according to Claim 1, wherein layer C is made of a polyolefin based on a monomer which is present in a predominant amount in the polyolefins of foam layer A.

Claim 7. A multilayer film according to claim 6, wherein the polyolefin is polypropylene.

Claim 8. A multilayer film according to Claim 1, wherein layer E is present and is made of ethylene-vinylalcohol copolymer.

Claim 9. A multilayer film according to Claim 1, wherein layer G is made of a sealable polymer and optionally contains additives.

Claim 10. A multilayer film according to Claim 9, wherein layer G is made of a low density polyethylene or an ionomer.

Claim 11. A multilayer film according to Claim 1, wherein layer G is made of a peelable polymer and optionally contains additives.

Claim 12. A multilayer film according to Claim 11, wherein layer G is made of a mixture of low density polyethylene and a polybutylene.

Claim 13. A multilayer film according to Claim 1, wherein the total thickness of layers C to G ranges from 20 to 70 μm .

Claim 14. A multilayer film according to Claim 13, wherein the total thickness is 30 to 50 μm .

Claim 15. A packaging material comprising the multilayer film of Claim 1.

Claim 16. A packaging item made of a film according to Claim 1.

Claim 17. A packaging item according to Claim 16, wherein said packaging item is a packaging tray.